

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P310738

Luminaire Tested: **24FCZ2-40-UNV-L82765-CP125-W2A-U-5000K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P310738
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40-UNV-L82765-CP125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (168) 5000K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3723.0 lumens
Efficiency: N/A
Efficacy: 111.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

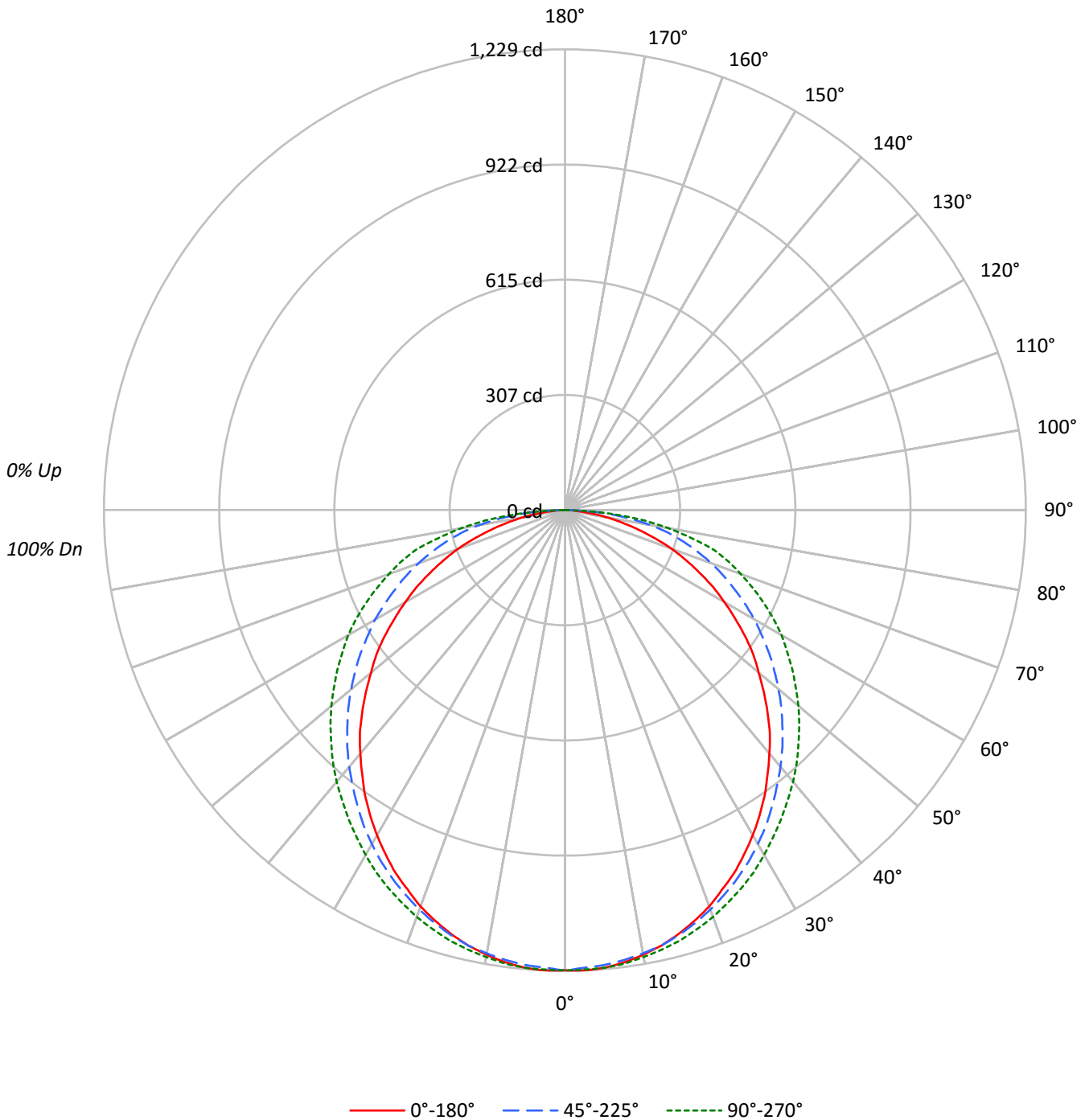
Input Watts (W): 33.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1652	1652	1652
5°	1655	1645	1655
10°	1645	1640	1654
15°	1631	1635	1655
20°	1611	1624	1654
25°	1586	1612	1652
30°	1556	1599	1650
35°	1526	1583	1652
40°	1490	1571	1662
45°	1455	1561	1676
50°	1412	1557	1701
55°	1376	1559	1736
60°	1323	1572	1795
65°	1262	1589	1860
70°	1196	1638	1963
75°	1066	1708	2145
80°	909	1809	2192
85°	648	1792	2098



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.2	3.1
10°-20°	332.3	8.9
20°-30°	501.8	13.5
30°-40°	604.8	16.2
40°-50°	635.0	17.1
50°-60°	594.1	16.0
60°-70°	490.6	13.2
70°-80°	334.3	9.0
80°-90°	114.0	3.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	950.3	25.5
0°-40°	1555.1	41.8
0°-60°	2784.1	74.8
0°-90°	3723.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3723.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1228	1228	1228	1228	1228	
5°	1225	1224	1218	1225	1225	116
15°	1171	1172	1174	1186	1188	330
25°	1068	1073	1086	1107	1113	492
35°	929	939	964	996	1006	580
45°	765	781	820	865	881	590
55°	587	610	665	719	740	524
65°	396	430	499	562	584	393
75°	205	252	329	390	413	219
85°	42	83	116	131	136	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1227.8	1227.8	1227.8	1227.8	1227.8
2.5°	1229.0	1227.8	1221.6	1227.8	1226.6
5°	1225.3	1224.1	1217.9	1225.3	1225.3
7.5°	1216.7	1216.7	1210.5	1219.2	1220.4
10°	1204.3	1204.3	1200.6	1210.5	1210.5
12.5°	1189.5	1189.5	1189.5	1199.4	1200.6
15°	1171.0	1172.2	1173.5	1185.8	1188.3
17.5°	1148.8	1151.2	1154.9	1169.8	1172.2
20°	1125.3	1127.8	1133.9	1151.2	1154.9
22.5°	1095.6	1101.8	1110.5	1130.2	1133.9
25°	1068.5	1073.4	1085.8	1106.8	1112.9
27.5°	1035.1	1042.5	1058.6	1080.8	1089.5
30°	1001.8	1009.2	1028.9	1054.9	1062.3
32.5°	965.9	977.1	998.1	1025.2	1033.9
35°	928.9	938.8	963.5	995.6	1005.5
37.5°	888.1	901.7	928.9	963.5	975.8
40°	848.6	863.4	894.3	931.4	946.2
42.5°	809.1	823.9	858.5	900.5	915.3
45°	764.6	780.7	820.2	864.7	880.7
47.5°	720.1	739.9	783.1	830.1	847.4
50°	674.4	696.7	743.6	793.0	812.8
52.5°	633.7	654.7	704.1	757.2	775.7
55°	586.7	610.2	664.6	718.9	739.9
57.5°	538.6	564.5	622.6	681.8	702.8
60°	491.6	520.0	584.3	643.6	667.0
62.5°	445.9	474.3	541.0	602.8	626.3
65°	396.5	429.9	499.0	562.0	584.3
67.5°	349.6	385.4	458.3	520.0	542.3
70°	303.9	338.5	416.3	476.8	499.0
72.5°	254.5	294.0	371.8	434.8	458.3
75°	205.0	252.0	328.6	390.3	412.6
77.5°	159.3	207.5	284.1	334.7	345.9
80°	117.3	166.8	233.5	269.3	282.9
82.5°	75.3	124.8	177.9	203.8	214.9
85°	42.0	82.8	116.1	130.9	135.9
87.5°	17.3	35.8	46.9	53.1	53.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)